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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/658,866	09/08/2000	Dirk P. Gunther	7099-1267	2936

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EXAMINER

PORTER, RACHEL L

ART UNIT	PAPER NUMBER
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3626

DATE MAILED: 06/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/658,866

Applicant(s)

GUNTHER ET AL.

Examiner

Rachel L. Porter

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/2/05.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Notice to Applicant

1. This communication is in response to the application filed 2/2/05. Claims 1-17 are pending.

Claim Rejections - 35 USC § 101

2. The rejection of claims 1-7 under 35 U.S.C. 101 is hereby withdrawn due to the amendment filed 2/2/05.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4, 6-7, 11-14, and 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Barlow (USPN 5,652,867).

As per the limitations of claims 1-4 and 6-7, Barlow teaches a method for optimizing a schedule of legs employed in transporting objects between geographic markets, comprising the steps of:

- identifying a set of itineraries for serving each market in a set of markets, each itinerary comprising one or more legs; (Figure 1; col. 3, lines 45-65)

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- generating a set of market plans for each of a plurality of markets (e.g. set of markets), each market plan comprising a modified set of the itineraries for the market, (Figures 2 and 4; col. 4, lines 15-45,)
- individually determining the profitability of each market plan for each market, following generation of new set of market plans for each of the plurality of markets (Figs 2,4-5; col. 5, lines 66-col. 6, line 4)
- selecting from the set of market plans for each market a subset optimizing the profit of the schedule, while accounting for the resources of the service provider, wherein the subset of markets is selected following a determination of profitability for each market plan for each market (Figures 2, 4-5; col. 2, lines 39-47; col. 6, lines 36-46, 56-67)

Barlow further teaches a method that uses a "profitability model" (i.e. a model that assists in determining the profitability of various itineraries) and wherein various parameters may be considered and/or manipulated in determining flight schedules (col. 5, lines 29-46).

As per the added limitation of "wherein at least one of the identifying, generating, determining... steps is performed by a computer processor," see Figure 6, which shows the determination of profitability (e.g. revenue potential) of each market plan as a computer generated output.

Claims 11-14 and 16-17 repeat the subject matter of claims 1-4 and 6-7 as a set of computer readable instructions (for causing a computer) to perform the steps recited in claims 1-4 and 6-7. As the underlying process has been shown to be fully disclosed

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and computer implemented by the teachings of Barlow et al in the above rejection of claims 1-4 and 6-7, it is readily apparent that the Barlow reference includes computer instructions cause a compute to perform the recited functions. As such, these limitations are rejected for the same reasons provided in the rejection of claims 1-4 and 6-7, and incorporated herein.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 5, 8-10, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barlow et al (USPN 5,652,867) in view of Official Notice.

As per claim 5, Barlow teaches a method for optimizing schedules and transportation legs as explained in the rejection of claim 1, but does not expressly disclose the use of a mixed integer program in performing these optimization functions. However, it is noted that the use of mixed integer programs for optimization problems is old and well known in the art. At the time of the Applicant's invention, it would have been obvious to one of ordinary skill in the art to incorporate the use of a mixed integer program in the optimization method of Barlow. One would have been motivated to include this feature to efficiently model and process the complex calculations required for the optimization process.

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System claims 8-10 repeat the subject matter of claims 1-4 as a set of components capable of performing the functions recited claims 1-4. As the underlying process has been shown to be fully disclosed by the teachings of Barlow et al in the above rejection of claims 1-4, it is readily apparent that the Barlow reference includes a system to perform the recited functions. As such, these limitations are rejected for the same reasons provided in the rejection of claims 1-4 and incorporated herein.

Claim 8 further recites that the system includes a mixed integer program for performing various optimization functions (e.g. subsetting functions). Barlow teaches a system for optimizing schedules and transportation legs as explained in the rejection of claim 1, but does not expressly disclose the use of a mixed integer program in performing these optimization functions. However, it is noted that the use of mixed integer programs for optimization problems is old and well known in the art. At the time of the Applicant's invention, it would have been obvious to one of ordinary skill in the art to incorporate the use of a mixed integer program in the optimization system of Barlow. One would have been motivated to include this feature to efficiently model and process the complex calculations required for the optimization process.

As per claim 15, the limitations of the present claim are addressed by the rejections of claims 5 and 11, and incorporated herein.

Response to Arguments

7. Applicant's arguments filed 2/2/05 have been fully considered but they are not persuasive.

(A) Applicant argues that Barlow does not disclose generating a plurality of market plans and determining the profitability of each market plan. The Applicant further states that the Barlow '867 reference describes the generation of a single modified market plan for each market.

In response, the Examiner respectfully disagrees with the Applicant's interpretation of the applied reference. Barlow discloses that the system obtains a set of results and must summarize these results (col. 4, lines 15-20; Figure 1). The Examiner understands this to mean that multiple solutions/results are provided, not just a single solution as suggested by the Applicant. Moreover, Barlow discloses that the system performs analyses and valuations for several market plans for various individual markets. (col. 5, lines 40-col. 6, lines 3)

(B) Applicant argues that the Barlow reference fails to "teach or suggest selecting a subset of market plans from among the set of market plans that has been generated for each market to optimize overall profit schedule 'while accounting for resources of a service provider'."

Again, the Examiner respectfully disagrees with the Applicant's interpretation of the applied reference. Barlow discloses that the system obtains a set of results and must summarize these results (col. 4, lines 15-20; Figure 1). The Examiner understands

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this to mean that multiple solutions/results are provided, not just a single solution as suggested by the Applicant. Moreover, Barlow discloses that the system performs analyses and valuations for several market plans for various individual markets. (col. 5, lines 40-col. 6, lines 3)

Also, the Examiner respectfully submits that the Applicant fails to realize the breadth of the current claim language. For example, while the claim language recites "accounting for resources of a service provider," the current claim does not recite any guidelines or limitations to explain how the claimed invention (system or method) accounts for the resources of a service provider. (e.g. fleet/inventory assessments; customer demands). However, the Examiner has interpreted the claim language and applied art accordingly, given the breadth current claim language. Barlow discloses a system that takes into account flight service to a given travel provider based upon market size and average market revenue, among factors. (col. 3, lines 46-59; col. 5, lines 61-65)

(C) Applicant argues the Examiner's use of Official Notice, stating that one of ordinary skill in the art would not have been motivated to use a mixed integer program to solve the optimization problem presented in claims 1, 8, and 11.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the use of mixed integer programs) are not recited in claims 1 and 11. Although the claims are interpreted in light of the specification, limitations from the specification

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are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Furthermore, as to Applicant's assertion that Barlow does not "describe the imposition of constraints upon possible solutions as would require an optimization and as are imposed by the resource limitations of the service providers set forth by the claimed invention," it is respectfully that the current language of claimed invention also fails to bring forth such distinctions. As explained in paragraph 7(B) of the current Office Action, the claim language fails to detail or recite the resource limitations of the travel service providers and other constraints, which must be considered in order to apply the appropriate optimization strategy and to derive the appropriate solution(s).

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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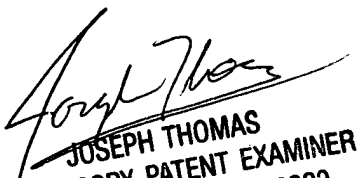
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rachel L. Porter whose telephone number is (571) 272-6775. The examiner can normally be reached on M-F, 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Thomas can be reached on (571) 272-6776. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-3600.

RP
RP


JOSEPH THOMAS
SUPERVISORY PATENT EXAMINER
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